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Attorney Docket No. P20416

In re application of : T. T. SCHERB

Serial No. : 09/769,275

Group Art Unit: 1731

Filed : January 26, 2001

Examiner: M. Halpern

For : FORMER AND PROCESS FOR PRODUCING A TISSUE WEB

COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith is an Appeal Brief (in trip) in the above-captioned application.

- ☐ Small Entity Status of this application under 37 C.F.R. 1.9 and 1.27 has been established by a previously filed statement.
- ☐ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 1.27 is enclosed.
- ☐ A Request for Extension of Time.
- ☐ No Additional Fee.
- ☐
- ☐

The fee has been calculated as shown below:

Claims After Amendment	No. Claims Previously Paid For	Present Extra	Small Entity		Other Than A Small Entity	
			Rate	Fee	Rate	Fee
Total Claims: 69	*69	0	x 9=	\$	x 18=	\$0.00
Indep. Claims: 5	**5	0	x 43=	\$	x 86=	\$0.00
Appeal Fee			165=	\$	+330=	\$330.00
Extension Fees for Month				\$		\$0.00
Total:				\$	Total:	\$330.00

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Neil F. Greenblum  
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*AF35.83*



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Thomas THORÖE SCHERB et al.

Art Unit: 1731

Appln. No. : 09/769,275

Examiner: M. Halpern

Filed : January 26, 2001

For : FORMER AND PROCESS FOR PRODUCING A TISSUE WEB

**APPEAL BRIEF**

Commissioner For Patents  
PO Box 1450  
Alexandria, Virginia 23313-1450

Sir:

This appeal is from the Examiner's non-final rejection of October 22, 2003. Appellant submits that the instant Appeal is proper pursuant to 35 U.S.C. section 134 because the claims have been twice rejected. Appellant filed a Notice of Appeal on January 5, 2004 and is filing this Appeal Brief by the two month due date of March 5, 2004.

**A. REAL PARTY IN INTEREST**

The real party in interest for the invention is Voith Paper Patent GmbH of Heidenheim, Germany by an assignment recorded in the U.S. Patent and Trademark Office on February 15, 2001 at Reel 011526 and Frame 0836.

**B. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences which would directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **C. STATUS OF CLAIMS**

Claims 1-5, 7-12 and 16 stand twice rejected under 35 USC 102(b) as being anticipated by WO 96/35018 to KAMPS et al. (hereafter KAMPS).

Claims 13-15 and 17-21 stand twice rejected under 35 USC 103(a) as being unpatentable over KAMPS in view of WO 94/28242 to ERIKSON et al. (hereafter ERIKSON).

Claims 22, 24-27, 29-47 and 68 stand twice rejected under 35 USC 103(a) as being unpatentable over KAMPS in view of ERIKSON and further in view of US patent 6,231,723 to KANITZ et al. (hereafter KANITZ).

Claim 69 stands twice rejected under 35 USC 103(a) as being unpatentable over KAMPS in view of ERIKSON and KANITZ, and further in view of DE 197 56 422 to TIETZ et al. (hereafter TIETZ).

Claims 6, 23 and 28 have been canceled and claims 48-67 and 70 remain pending but have been withdrawn from examination on the basis of a restriction requirement.

### **D. STATUS OF AMENDMENTS**

The response to the Final Official Action filed on June 4, 2003 has been considered and addressed in the non-final Office Action of October 22, 2003, which issued following the filing of a Request for Continued Examination (RCE) on June 30, 2003. No amendment, other than the aforementioned response, has been filed following the final rejection and the

subsequent non-final Office Action.

## **E. SUMMARY OF INVENTION**

By way of non-limiting examples of the invention, Fig. 1 shows in schematic representation a crescent former 10 of a machine for producing a tissue web 22. Two circulating continuous dewatering belts 12 and 14 are provided and arranged to converge so as to form a stock inlet nip 16. Belts 12 and 14 are subsequently guided over a forming element which may have the form of a forming roll 18. See paragraph [0037] of the instant specification.

In operation, a fibrous stock suspension is introduced into stock inlet nip 16 via a headbox 20. A dewatering wire having zonally variable wire permeability, e.g., such as a so-called DSP wire, is provided as outer belt 14. This outer belt 14 is arranged so that it does not contact forming roll 18. Inner belt 12 is arranged to contact forming roll 18 and may be a felt belt in the present exemplary embodiment. See paragraphs [0038] and [0039] of the instant specification.

After exiting forming roll 18, the formed tissue web 22 passes together with inner belt 12, into a press nip 24 which may be an elongated press nip. Press nip 24 may be formed between a tissue dewatering cylinder 26, e.g., a Yankee cylinder, and a shoe press unit 28, e.g., such as a shoe press roll. Arranged before the press nip 24, in the web travel direction L, is positioned a suction device 30. Inner belt 12, which serves to guide tissue web 22, is

also guided over suctioned device 30, e.g., in the form of a suction roll. A drying cover 32 can also be provided with Yankee cylinder 26. See paragraphs [0040] and [0041] of the instant specification.

Fig. 2 illustrates an enlarged representation of the forming zone of the former shown in Fig. 1, in which the essential details of the arrangement according to the invention are discernible. The former utilizes at least one suction element 36 which is positioned inside the loop of inner belt 12, in the area of separation point 34. Separation point 34 is a position where outer wire 14 and inner belt 12 are separated from each other. Alternatively or additionally, forming roll 18 can be provided with a suction zone 38. With such a suctioned forming roll 18, the fibrous web is pulled against inner belt 12 which can be a felt belt. See paragraphs [0042] and [0043] of the instant specification.

In the embodiment shown, suction element 36 is located, in the web travel direction L, in the area of separation point 34, e.g., in this case positioned in front of separation point 34. The vacuum present in suction element 36 can be adjustable. This can also be the case for the vacuum of suction zone 38. Moreover, each device may have its vacuum adjusted by an independent mechanism, e.g., such that each device is independently adjusted, or by a common mechanism which controls vacuum to both devices. Additionally, suction elements 36 or 38 can be embodied such that they affect inner belt 12 at least essentially over its entire width. See paragraph [0044] of the instant specification.

In the area of separation point 34, at least one blowing element 40 can also be provided inside the loop of outer wire 14. As a result, outer wire 14 can be impacted from the inside with a medium, for instance, such as blowing air. Blowing element 40 can be suitably embodied such that it affects outer wire 14 at least essentially over its entire width. See paragraph [0045] of the instant specification.

An outer wire 14 can be guided over suitably arranged guide rolls 42, 44, 46 and 48. Moreover, outer wire 14 may be arranged with a conditioning device 50 which can particularly be a wire cleaning device. Conditioning device 50 is suitably embodied such that it affects outer wire 14 at least essentially over its entire width. The conditioning device 50 may include a spray pipe, for instance, such as a “Duocleaner” made by the company Voith Sulzer, a roll having a scraper inserted into the corresponding dewatering wire, and/or the like. See paragraphs [0046] and [0047] of the instant specification.

Fig. 3 illustrates a schematic representation of one embodiment of a conditioning device 50 which is assigned to a corresponding dewatering wire, in this case, outer wire 14. Outer wire 14 is embodied with a zonally variable wire permeability. Conditioning device 50 also includes a roll 52 and a scraper 54 assigned thereto which is inserted into outer wire 14. Arranged in the belt travel direction S and in front of roll 52, is a spray pipe 56 which is positioned on the same side of outer wire 14 as roll 52. Any contaminated water and the like which exits from outer wire 14 is accepted by an accepting device 58 which is provided

on the other side of outer wire 14. See paragraph [0048] of the instant specification.

In the exemplary embodiment depicted in Fig. 2, conditioning device 50 is positioned between guiding rolls 42 and 48. However, conditioning device 50 may also be positioned in the area of other guide rolls and, for instance, in the area adjacent guide roll 42 (cf. Figs. 4 through 6). See paragraph [0049] of the instant specification.

Figs. 4 - 6 illustrates various embodiments a conditioning device 50. See paragraphs [0050] - [0055] of the instant specification.

The inner and/or outer wires made have a design similar to that described in WO 00/12817 (application PCT/GB99/02684), for example, they can be used as wires with a variable permeability. According to this configuration, the wires in question can be made, in particular, of a woven material in which threads, provided on one or more levels running in a first direction, are interwoven with threads running in a second direction such that a grid results which separates a multitude of systematically distributed areas of predeterminable configurations and fixes them accordingly. The systematically distributed areas may have at least three threads running in the one direction and at least three in the other. The threads can particularly be woof threads and warp threads. See paragraph [0056] of the instant specification.

Fig. 7 depicts one possible example of a diagram of a weaving pattern. In particular, a section of a possible embodiment of such a woven material repeating itself is shown which

forms a dewatering wire with zonally variable wire permeability. In the present exemplary embodiment, the repeating diagram of a weaving pattern contains ten woof threads and ten warp threads. In the area of the shaded squares, the woof thread is positioned beneath the warp thread. However, in the area of the light squares the woof thread is positioned above the warp thread. Depending on the prevailing conditions, the one or the other side of the diagram of the weaving pattern can be on the outside. The shaded areas form a grid 86 by which finally a multitude of systematically distributed areas 88 of a predetermined configuration are separated from one another and are fixed accordingly. See paragraphs [0057] and [0058] of the instant specification.

Fig. 8 shows an enlarged representation of the forming zone of the former depicted in Fig. 1 and illustrates one embodiment of how the vacuum to the suction zone is regulated or controlled. The former utilizes regulated, controlled and/or adjustable vacuum to suction zone 38 which is positioned inside the loop of inner belt 12, in the area of forming roll 18. A vacuum device P which may be a vacuum pump or an exhaust fan or similar vacuum source is connected to suction zone 38 to supply vacuum thereto. A valve V which may be a throttling device or a butterfly valve or the like is positioned in between the vacuum device P and the suction zone 38 in order to regulate the amount of vacuum which reaches the suction zone 38. A pressure gauge PG is positioned in the area of the suction zone 38 in order to measure a pressure in the suction zone 38. Each of the valve V and the pressure



gauge PG is connected to a control unit. The control unit may utilize a set point SP and control instrumentation which functions as a pressure indicated and controlled PIC system. In operation, valve V is set to achieve a certain vacuum in the suction zone 38. The desired vacuum may be achieved, e.g., when the dryness of the tissue web is higher than approximately 8% and preferably higher than approximately 12%. Additionally, it is preferred that the dryness be determined and/or measured after the suction zone 38 in the web travel direction L. The dryness may be measured by various dryness measuring devices such as a radioactive gauge or the like. The dashed line indicates an optional control circuit for the vacuum in the suction zone 38. See paragraphs [0059] and [0060] of the instant specification.

Fig. 9 shows an enlarged representation of the forming zone of the former depicted in Fig. 1 and illustrates another embodiment of how the vacuum to a two zone suction zone is regulated or controlled. The former utilizes regulated, controlled and/or adjustable vacuum to a two zone suction zone 38' and 38" which is positioned inside the loop of inner belt 12, in the area of forming roll 18. Suction zone is divided into a first suction zone 38' and a second suction zone 38". A vacuum device P which may be a vacuum pump or an exhaust fan or similar vacuum source is connected to suction zone 38 to supply vacuum thereto. A valve V which may be a throttling device or a butterfly valve or the like is position in between the vacuum device P and the suction zone 38 in order to regulate the amount of

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vacuum which reaches the suction zone 38. A pressure gauge PG is positioned in the area of the suction zone 38 in order to measure a pressure in the suction zone 38. Each of the valve V and the pressure gauge PG is connected to a control unit. The control unit may utilize a set point  $SP_s$  and control instrumentation which functions as a pressure indicated and controlled PIC system. In operation, the vacuum in first suction zone 38' may be related and/or determined based upon the dewatering behavior of the web. In second suction zone 38'', the vacuum may be related and/or determined based upon the separation behavior of the web from wire 14. In this regard, the stronger the web attaches to the wire 14 at separation 34, the higher the vacuum in zone 38'' is adjusted to be in order to improve the ability of the web to detach from wire 14. As in the embodiment of Fig. 8, valve V may be set to achieve a certain vacuum in each zone 38' and 38''. The desired vacuum may be achieved, e.g., when the dryness of the tissue web is higher than approximately 8% and preferably higher than approximately 12%. Additionally, it is preferred that the dryness be determined and/or measured after suction zone 38' or suction zone 38'' in the web travel direction L. The dryness may be measured by various dryness measuring devices such as a radioactive gage or the like. The system may also include devices for determining dewatering behavior of the web such as a camera. The dashed line indicates an optional control circuit for the vacuum in either or both suction zones 38' and 38''. See paragraphs [0061] and [0062] of the instant specification.

Fig. 10 shows an enlarged representation of the forming zone of the former depicted in Fig. 1 and illustrates still another embodiment of how the vacuum to the suction device is regulated or controlled. The former utilizes regulated, controlled and/or adjustable vacuum to suction device 36 which is positioned inside the loop of inner belt 12, in the area of separation point 34. A vacuum device P which may be a vacuum pump or an exhaust fan or similar vacuum source is connected to suction zone 38 to supply vacuum thereto. A valve V which may be a throttling device or a butterfly valve or the like is positioned in between the vacuum device P and the suction device 36 in order to regulate the amount of vacuum which reaches suction device 36. A pressure gauge PG is positioned in the area of suction device 36 and separation point 34 in order to measure a pressure at suction device 36. Each of the valve V and the pressure gauge PG is connected to a control unit. The control unit may utilize a set point  $SP_s$  and control instrumentation which functions as a pressure indicated and controlled PIC system. In operation, valve V is set to achieve a certain vacuum in suction device 36. The desired vacuum may be achieved, e.g., when the dryness of the tissue web is higher than approximately 8% and preferably higher than approximately 12%. Additionally, it is preferred that the dryness be determined and/or measured after the suction zone 38 in the web travel direction L. The dryness may be measured by various dryness measuring devices such as a radioactive gage or the like. Also, vacuum in suction device 36 may relate or be determined by the release behavior of the web from wire 14 as described

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above in Fig. 9. Moreover, set point  $SP_s$  may be set by hand or automatically depending on the release behavior. Accordingly, if the web or a portion of the web, e.g., the edges of the web, is not detached safely from wire 14, the vacuum in suction device 36 may be increased. Such a design allows the web to be separated more safely so that the sheet run is stabilized, e.g., so that the edges of the web do not flutter. Thus, the complete web is in stable contact with wire 12. As in the other embodiments, the dashed line indicates an optional control circuit for the vacuum in the suction device 36. See paragraphs [0063] and [0064] of the instant specification.

The vacuum control systems shown in Figs. 8-10 may be combined into one complete system so that the vacuum in each of suction zone 38 and suction device 36 can be controlled and/or adjusted together. Various dryness measurement devices, separation detection devices, and other devices for determining dewatering behavior may also be included. See paragraph [0065] of the instant specification.

## **F. ISSUES ON APPEAL**

- (A) **Whether Claims 1-5, 7-12 and 16 Are Improperly Rejected Under 35 U.S.C. section 102(b) as Anticipated By KAMPS.**
- (B) **Whether Claims 13-15 and 17-21 Are Improperly Rejected Under 35 U.S.C. section 103(a) as Unpatentable Over KAMPS in View of ERIKSON.**
- (C) **Whether Claims 22, 24-27, 29-47 and 68 Are Improperly Rejected Under 35 U.S.C. section 103(a) as Unpatentable Over KAMPS in View of**

**ERIKSON and Further in View of KANITZ.**

- (D) **Whether Claim 69 Is Improperly Rejected Under 35 U.S.C. section 103(a) as Unpatentable Over KAMPS in View of ERIKSON and KANITZ and Further in View of TIETZ.**

**G. GROUPING OF CLAIMS**

The following groups of claims are considered to stand or fall together, but only for the purpose of this appeal: claims 2-5, 8 and 16 stand or fall with claim 1; claim 12 stands or falls with claim 11; claims 19 and 20 stand or fall with claim 17; claims 24-27, 30 and 44-47 stand or fall with claim 22; claims 34 and 38 stand or fall with claim 33; and claim 69 stands or falls with claim 68. The remaining claims do not stand or fall together, at least for reasons explained below.

**H. ARGUMENT**

- (A) **The Rejection of Claims 1-5, 7-12 and 16 Under 35 U.S.C. section 102(b) over KAMPS is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claims 1-5, 7-12 and 16 under 35 USC 102(b) as being anticipated by KAMPS is requested.

In the rejection, the Examiner asserted that KAMPS, and in particular Fig. 5 thereof, discloses all of the features of these claims including, among other things, a forming roll 15 and two belts which separate from each other. Appellant respectfully disagrees with this rejection.

Appellant respectfully submits that, contrary to the Examiner's assertions, KAMPS does not disclose, or even suggest, *inter alia*, a forming element comprising a forming roll, an inner dewatering belt, and an outer dewatering belt, *at least one of the inner and outer belts being a dewatering belt having zonally variable wire permeability*, the inner and outer belts being guided by the forming roll and thereafter separating from one another in the area of a separation point, and at least one suction element being positioned *at least one of within the forming roll and adjacent the area of the separation point*, wherein the inner and outer belts separate from each other *immediately following* the forming roll, as recited in independent claim 1.

Appellant notes that the suction device 30 shown in Fig. 5 is located far downstream from both forming roll 15 and the separation point and is not positioned *at least one of within the forming roll and adjacent the area of the separation point*. Appellant emphasizes that Fig. 5 of KAMPS shows an embodiment in which a suction device 30 is located far away from where the belts 12 and 13 separate, i.e., it is clearly not positioned *adjacent the area of the separation point*. It is also clear that the suction device 30 is not arranged *within the forming roll 15*, as alternatively recited in independent claim 1.

Moreover, while Appellant notes that Fig. 5 (and page 9, lines 27-35) of KAMPS apparently discloses the use of a decorative forming fabric 13 as an outer wire on a crescent former, it is clear that, unlike the invention, there is no disclosure or suggestion in KAMPS

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with regard to using *a dewatering belt having zonally variable wire permeability* in order to ensure that the tissue web can be securely lifted from one of the wires via a suction device.

By way of background, Webster's II New College Dictionary defines the term "adjacent" as to lie near, or close to, or next to. Clearly, such a definition at least precludes the arrangement shown in Fig. 5 of KAMPS, which shows the suction device 30 arranged far downstream from the separation point of belts 12 and 13.

Additionally, Appellant submits that it is improper to characterize the distance between the forming roll 15 and separation point between belts 12 and 13 shown in Fig. 5 of KAMPS as *immediately following* the forming roll 15. Appellant notes that Figs. 2 and 8-10 of the instant application clearly show the inner belt 12 and outer belt 14 separating from each other immediately following the forming roll 18.

By way of background, Webster's II New College Dictionary defines the term "immediate" as occurring at once. This definition is fully supported by Appellant's Figs. 2 and 8-10 which shown the belts 12 and 14 beginning to separate from each other once they leave the forming roll 18. Clearly, such a definition at least precludes the arrangement shown in Fig. 5 of KAMPS, which shows the belts 12 and 13 separating from each other after passing past another roll arranged downstream from the forming roll 15.

Finally, Appellant submits that the Examiner has set forth no legal basis for disregarding and/or for not giving patentable weight to the above-noted recited features.

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Appellant submits that the Examiner is not free to disregard features which describe and limit the invention. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1306, 51 USPQ2d 1161, 1166 (Fed. Cir. 1999).

By way of background, the instant invention shown in Figs. 1, 2 and 8-10 show various embodiments wherein the suction element (36 or 38) is positioned either within the forming roll 18 (as in refs. 38, 38' and 38'') or adjacent (as in ref. 36) the area of the separation point 34.

For the foregoing reasons and because each of these documents fails to disclose the above-noted features of the instant invention, Appellant submits that these documents fail to disclose each and every recited feature of claim 1. Accordingly, Appellant submits that the Examiner has failed to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b) and that the instant rejection is improper.

Claims 2-5 stand or fall with claim 1 for purposes of appeal;

Claim 7 is separately patentable from claim 1 in that it recites that each of the inner and outer belts is a circulating continuous dewatering wire having zonally variable wire permeability. Appellant notes that page 9, lines 32-33 of KAMPS merely describes belt 13 as a decorative forming fabric, while belt 12 is described as a papermaking fabric. Appellant submits that the Examiner has identified no disclosure in this document which can reasonably be said to disclose that *each of the inner and outer belts is a circulating continuous*



*dewatering wire having zonally variable wire permeability;*

Claim 8 stands or falls with claim 1 for purposes of appeal;

Claim 9 is separately patentable from claim 1 in that it recites that the forming element comprises the at least one suction element. Appellant notes page 9, lines 34-36 of KAMPS describes the forming roll 15 as a roll which dewateres the web with “centrifugal force”. KAMPS does not disclose, or even suggest, positioning one or more suction elements within the forming roll 15. Moreover, Appellant submits that the Examiner has identified no disclosure in this document which can reasonably be said to disclose that *the forming element comprises the at least one suction element;*

Claim 10 is separately patentable from claims 9 and 1 in that it recites that the forming element comprises a suction zone. Again, Appellant notes page 9, lines 34-36 of KAMPS describes the forming roll 15 as a roll which dewateres the web with “centrifugal force”. KAMPS does not disclose, or even suggest, positioning one or more suction zones within the forming roll 15. Moreover, Appellant submits that the Examiner has identified no disclosure in this document which can reasonably be said to disclose that *the forming element comprises a suction zone;*

Claim 11 is separately patentable from claim 1 in that it recites that the at least one suction element is positioned adjacent the area of the separation point. While Appellant acknowledges that Fig. 5 of KAMPS shows a suction device 30 arranged downstream from

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a forming roll 15, Appellant submits that the Examiner cannot properly characterize the distance between the suction element 30 and the separation point between belts 12 and 13 as “adjacent”. The Examiner simply cannot reasonably characterize the distance shown in Fig. 5 as either lying near, or close to, or next to each other;

Claim 12 stands or falls with claim 11 for purposes of appeal; and

Claim 16 stands or falls with claim 1 for purposes of appeal.

Thus, for reasons given above, including reasons given for the reversal of the rejection of independent claim 1, reversal of the Examiner’s decision to twice reject claims 1-5, 7-12 and 16 is requested. Further, Appellants request that the application be remanded to the Examiner for allowance.

**(B) The Rejection of Claims 13-15 and 17-21 Under 35 U.S.C. section 103(a) over KAMPS in View of ERIKSON is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claims 13-15 and 17-21 under 35 USC 103(a) as being unpatentable over KAMPS in view of ERIKSON is requested.

In the rejection, the Examiner asserted that KAMPS discloses all the claimed features except for a suction device having adjustable vacuum. However, the Examiner asserted that ERIKSON teaches this feature. Accordingly, the Examiner concluded that it would have been obvious to one of ordinary skill in the art to modify the device disclosed in KAMPS in view of ERIKSON.

Appellant respectfully disagrees that the above-noted claims are unpatentable over the suggested combination of documents. The Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. This burden is perhaps most succinctly stated in M.P.E.P. 706.02(j) (pages 700-16 - 700-17, July 1998), viz., after indicating that the rejection is under 35 U.S.C. §103, there should be set forth (1) the relevant teachings of the prior art relied upon; (2) the difference or differences in the claim over the applied reference(s); (3) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and (4) an explanation why such proposed modification would have been obvious. It is further explained that, to establish a prima facie case of obviousness, three additional criteria are necessary: (1) there must be some suggestion or motivation to modify the reference; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. Further, in citing *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991) and *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985), it is stated in the M.P.E.P. that the teaching or suggestion to make the claimed invention must be found in the prior art and not be based upon the Appellants' disclosure. *M.P.E.P. 706.02(j) citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appellant submits that the rejection should be reversed at least for the following reasons. First, the references themselves (KAMPS and ERIKSON) fail to provide disclosure

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for each and every feature recited in the above-noted claims. Second, there is no motivation to combine the teachings of the prior art references in the manner asserted by the Examiner.

Inasmuch as these claims depend from claim 1, Appellant incorporates the arguments presented above with regard to KAMPS.

Additionally, Appellant submits KAMPS, as modified by ERIKSON, does not render the combination of features recited in independent claim 1 unpatentable and that it would not have been obvious to combine the teachings of KAMPS in view of ERIKSON.

In particular, Appellant respectfully submits that no proper combination of KAMPS and ERIKSON discloses or suggests, inter alia, a forming element comprising a forming roll, an inner dewatering belt, and an outer dewatering belt, *at least one of the inner and outer belts being a dewatering belt having zonally variable wire permeability*, the inner and outer belts being guided by the forming roll and thereafter separating from one another in the area of a separation point, and at least one suction element being positioned *at least one of within the forming roll and adjacent the area of the separation point*, wherein the inner and outer belts separate from each other *immediately following* the forming roll, as recited in independent claim 1.

Moreover, in addition to the arguments presented above with regard to KAMPS failing to disclose or suggest the combination of features recited in claim 1, Appellant notes that Fig. 1 that ERIKSON merely teaches to separate the belts 3 and 4 far away from the

forming roll 1, i.e., after roll 6.

Appellant notes that ERIKSON apparently teaches the use a suction zone (defined in angle  $\alpha$ ) in the forming roll 1 (see page 7, lines 25-29). However, it is clear that ERIKSON lacks any disclosure or suggestion with regard to separating *the inner and outer belts from each other immediately following the forming roll*. Finally, Appellant notes that this document also appears to lack any disclosure with regard to *a dewatering belt having zonally variable wire permeability*. Nor does this document appear to disclose using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device.

Thus, even if the teachings of these documents were properly combined, which Appellant submits they cannot be, such a combination would nevertheless lack the combination of features recited in at least independent claim 1. Moreover, Appellant submits that each of these documents fails to disclose or suggest the requisite motivation or rationale for combining these documents in the manner asserted by the Examiner. Finally, Appellant submits that the disclosure of ERIKSON fails to cure the deficiencies in KAMPS, and vice versa.

Because neither KAMPS nor ERIKSON provide any teaching or suggestion with regard to separating *the inner and outer belts from each other immediately following the forming roll* and/or with regard to *a dewatering belt having zonally variable wire permeability*, and in fact teach against the former feature, Appellant submits that it would not

have been apparent to one ordinarily skilled in the art to modify KAMPS to provide for belt separation immediately following the forming roll. Moreover, as the belts in KAMPS and ERIKSON are not disclosed as *having zonally variable wire permeability*, Appellant submits that there is no teaching or suggestion of this feature.

Thus, as the asserted combination of documents is contrary to the express teachings of each applied document, Appellant submits that the art of record fails to provide the requisite motivation or rationale for combining the art in the manner asserted by the Examiner.

Appellant reminds the Examiner of the guidelines identified in M.P.E.P section 2141 which state that “[i]n determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification.” *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

As this section clearly indicates, “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941

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(Fed. Cir. 1992).”

Moreover, it has been established that “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) .... Although a prior art device ‘may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.’ 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).”

Additionally, it has been held that “[a] statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references.” *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

Further, in addition to the fact that the rejection should be reversed, at least for the reason that a fair combination of the above-noted documents would not have resulted in the claimed invention, as recited in the independent claim 1, Appellant’s dependent claims

provide further limitations based upon which the rejection should be reversed.

In this regard, claims 13-15 and 17-21 depend from independent claim 1, and further recite features which provide a separate basis for patentability in that the recited features are not suggested by any proper combination of these documents. In particular:

Claim 13 is separately patentable from claim 1 in that it recites that the at least one suction element comprises a vacuum suction element and wherein the vacuum present inside the suction element is adjustable. While the Examiner has alleged that ERIKSON teaches an adjustable vacuum suction element, the Examiner has not identified any language in ERIKSON which specifically discloses *a vacuum suction element wherein the vacuum present inside the suction element is adjustable*. Appellant notes that the Examiner has identified no disclosure in either of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable;

Claim 14 is separately patentable from claim 1 in that it recites that the at least one suction element is positioned in front of the separation point, in a web travel direction. While Appellant acknowledges that the suction element 30 in KAMPS and/or the suction element 23 in ERIKSON are positioned in front of separation points, it is also clear that such separation points are not positioned *immediately following the forming roll*. To the contrary, Fig. 5 of KAMPS shows a separation point following, to a significant extent, the forming roll 15, while Fig. 1 of ERIKSON shows a suction element 23 well downstream of the



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forming roll 1. Appellant notes that the Examiner has identified no disclosure in either of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable;

Claim 15 is separately patentable from claim 1 in that it recites that the at least one suction element causes the inner belt to separate from the outer belt. While Appellant acknowledges that the suction element 23 ERIKSON is likely to cause belt separation, it is also clear that such separation does not occur *immediately following the forming roll*. To the contrary, Fig. 1 of ERIKSON shows a suction element 23 well downstream of the forming roll 1. Moreover, as KAMPS positions the suction element 30 well away from the separation point, it is clear that the suction element 30 does not cause in any way belt separation. Appellant notes that the Examiner has identified no disclosure in either of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable;

Claim 17 is separately patentable from claim 1 in that it recites that the former further comprises at least one blowing element positioned adjacent the outer belt on a side which is opposite the inner belt. While the Examiner has implicitly alleged that KAMPS or ERIKSON teaches the recited blowing element, the Examiner has not identified any feature in either of these documents which discloses the claimed blowing device. Appellant notes that the devices 1, 7 and 23 in Fig. 1 of ERIKSON are vacuum devices and not blowing

devices. Moreover, Fig. 5 of KAMPS shows no such blowing device. Thus, Appellant submits that the Examiner has identified no disclosure in either of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable;

Claim 18 is separately patentable from claims 17 and 1 in that it recites that the at least one blowing element is located in the area of the separation point. As noted above, the Examiner has not identified any feature in either of these documents which discloses the claimed blowing device, much less, one located in the area of the separation point. Appellant again notes that the devices 1, 7 and 23 in Fig. 1 of ERIKSON are vacuum devices and not blowing devices. Moreover, Fig. 5 of KAMPS shows no such blowing device. Thus, Appellant submits that the Examiner has identified no disclosure in either of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable;

Claims 19 and 20 stand or fall with claim 17 for purposes of appeal; and

Claim 21 is separately patentable from claim 1 in that it recites that the forming element comprises a suction zone having adjustable vacuum. While the Examiner has alleged that ERIKSON teaches an adjustable vacuum suction element, the Examiner has identified no language in ERIKSON which specifically discloses *a suction zone with adjustable vacuum*. Appellant notes that the Examiner has identified no disclosure in either

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of KAMPS and ERIKSON in support of the assertion that the combination of these documents renders this claim unpatentable.

Thus, for reasons given above, including reasons given for the reversal of the rejection of independent claim 1, reversal of the Examiner's decision to twice reject claims 13-15 and 17-21 is requested. Further, Appellants request that the application be remanded to the Examiner for allowance.

**(C) The Rejection of Claims 22, 24-27, 29-47 and 68 Under 35 U.S.C. section 103(a) over KAMPS in View of ERIKSON and KANITZ is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claims 22, 24-27, 29-47 and 68 under 35 USC 103(a) as being unpatentable over KAMPS in view of ERIKSON and KANITZ is requested.

In the rejection, the Examiner asserted that KAMPS and ERIKSON disclose all the claimed features except for a conditioning device. However, the Examiner asserted that KANITZ teaches this feature. Accordingly, the Examiner concluded that it would have been obvious to one of ordinary skill in the art to modify the device disclosed in KAMPS in view of ERIKSON and KANITZ. Appellant respectfully disagrees that the above-noted claims are unpatentable over the suggested combination of documents.

Appellant submits that the rejection should be reversed at least for the following reasons. First, the references themselves (KAMPS, ERIKSON and KANITZ) fail to provide

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disclosure for each and every feature recited in the above-noted claims. Second, there is no motivation to combine the teachings of the prior art references in the manner asserted by the Examiner.

Appellant submits that, contrary to the Examiner's assertions, KAMPS, as modified by ERIKSON and KANITZ, does not render the combination of features recited in independent claims 22 and 68 unpatentable and that it would not have been obvious to combine the teachings of KAMPS, ERIKSON and KANITZ.

In particular, Appellant respectfully submits that no proper combination of KAMPS, ERIKSON and KANITZ discloses or suggests, *inter alia*, a forming element comprising a forming roll, an inner dewatering belt, and an outer dewatering belt, the inner and outer belts converging to form a stock inlet nip, *at least one of the inner and outer belts being a dewatering belt having zonally variable wire permeability*, the inner and outer belts being guided by the forming roll and thereafter separating from one another in the area of a separation point, *a conditioning device positioned adjacent the outer belt*, and *at least one suction element being positioned at least one of within the forming roll and adjacent the area of the separation point*, wherein the inner and outer belts *separate from each other immediately following the forming roll*, as recited in independent claim 22, and *inter alia*, that each of the inner and outer belts is guided over the forming roll and *thereafter separating from one another in the area of a separation point located immediately following the forming*

*roll* and at least one of at least one suction element positioned inside the inner loop and adjacent the inner belt on a side which is opposite the outer belt and *a conditioning device positioned adjacent the outer belt so as to clean the outer belt*, wherein at least one of the inner and the outer belts is *a dewatering wire having zonally variable wire permeability*, as recited in independent claim 68.

As discussed above, Fig. 5 of KAMPS shows an embodiment in which a suction device 30 is located far away from where the belts 12 and 13 separate, i.e., it is not positioned *adjacent the area of the separation point*. It is also abundantly clear that the suction device 30 is not arranged *within the forming roll* 15. To the contrary, the suction device 30 in Fig. 5 of KAMPS is clearly located far downstream from both forming roll 15 and the separation point. It is further apparent that Fig. 5 of KAMPS does not show inner and outer belts which *separate from each other immediately following the forming roll*.

Moreover, while Appellant notes that Fig. 5 (and page 9, lines 27-35) of KAMPS apparently discloses the use of a decorative forming fabric 13 as an outer wire on a crescent former, it is clear that, unlike the invention, there is no disclosure or suggestion in KAMPS with regard to using *a dewatering belt having zonally variable wire permeability* in order to ensure that the tissue web can be securely lifted from one of the wires via a suction device. Finally, it is clear from Fig. 5 that KAMPS provides no conditioning device on the outer belt 13.

ERIKSON and, in particular Fig. 1, similarly teaches to separate the belts 3 and 4 far away from the forming roll 1, i.e., after roll 6. Accordingly, it is clear that this document does not disclose or suggest that *the inner and outer belts separate from each other immediately following the forming roll*. Appellant further notes that the Examiner has identified no disclosure in this document with regard to *a dewatering belt having zonally variable wire permeability*. Nor does this document appear to disclose using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device, as in Appellant's invention. Finally, it is clear from Fig. 1 that ERIKSON provides no conditioning device on outer belt 3.

KANITZ also teaches to separate the belts 26 and 28 far away from the forming roll 24, i.e., after pickup box 54. Accordingly, it is clear that this document does not disclose or suggest that *the inner and outer belts separate from each other immediately following the forming roll*. It is also apparent that this document does not disclose or suggest the at least one suction element being *positioned at least one of within the forming roll and adjacent the area of the separation point*. To the contrary, col. 3, line 13 indicates that the roll 24 is a breast roll. Finally, while Appellant acknowledges that col. 5, lines 13-15 of KANITZ discloses that one of the fabrics "may have a texture which imparts specialized functionality or appearance to the web", Appellant submits that this document also appears to lack any disclosure with regard to *a dewatering belt having zonally variable wire permeability*. Nor

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does this document appear to disclose using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device.

Thus, even if the teachings of these documents were properly combined, which Appellant submits they cannot be, such a combination would nevertheless lack the combination of features recited in at least independent claims 22 and 68. Moreover, Appellant submits that each of these documents fails to disclose or suggest the requisite motivation or rationale for combining these documents in the manner asserted by the Examiner. Finally, Appellant submits that the disclosure of ERIKSON and KANITZ fails to cure the deficiencies in KAMPS, and vice versa.

Because neither KAMPS, ERIKSON nor KANITZ provide any teaching or suggestion with regard to at least separating *the inner and outer belts from each other immediately following the forming roll and a dewatering belt having zonally variable wire permeability*, and in fact teach against the former feature, Appellant submits that it would not have been apparent to one ordinarily skilled in the art to modify KAMPS to provide for belt separation immediately following the forming roll. Moreover, as the belts in KAMPS, ERIKSON and KANITZ are not disclosed as *having zonally variable wire permeability*, Appellant submits that there is no teaching or suggestion of this feature.

Thus, as the asserted combination of documents is contrary to the express teachings of each applied document, Appellant submits that the art of record fails to provide the

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requisite motivation or rationale for combining the art in the manner asserted by the Examiner.

Further, in addition to the fact that the rejection should be reversed, at least for the reason that a fair combination of the above-noted documents would not have resulted in the claimed invention, as recited in the independent claims 22 and 68, Appellant's dependent claims provide further limitations based upon which the rejection should be reversed.

In this regard, claims 24-27 and 29-47 depend from independent claim 22, and further recite features which provide a separate basis for patentability in that the recited features are not suggested by any proper combination of these documents. In particular:

Claims 24-27 stand or fall with claim 22 for purposes of appeal;

Claim 29 is separately patentable from claim 22 in that it recites that each of the inner and outer belts is a circulating continuous dewatering wire having zonally variable wire permeability. Appellant notes that page 9, lines 32-33 of KAMPS merely describes belt 13 as a decorative forming fabric, while belt 12 is described as a papermaking fabric. Moreover, the Examiner has identified no language in ERIKSON which would disclose or suggest such a belt arrangement. Moreover, while Appellant acknowledges that col. 5, lines 13-15 of KANITZ discloses that one of the fabrics "may have a texture which imparts specialized functionality or appearance to the web", Appellant submits that such language is not suggestive of *each of the inner and outer belts being a circulating continuous dewatering*



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*wire having zonally variable wire permeability;*

Claim 30 stands or falls with claim 22 for purposes of appeal;

Claims 31 and 32 are separately patentable from claim 22 in that they respectively recite that the forming element comprises the at least one suction element and that the forming element comprises a suction zone. Appellant notes page 9, lines 34-36 of KAMPS describes the forming roll 15 as a roll which dewateres the web with “centrifugal force”. KAMPS does not disclose, or even suggest, positioning one or more suction elements or zones within the forming roll 15. Moreover, while Appellant acknowledges that the roll 1 in ERIKSON includes a suction zone, there is no apparent reason or basis for replacing the roll 15 of KAMPS with the roll 1 of ERIKSON. Finally, as noted above, KANITZ merely teaches to use a breast roll 24 as the forming element. The Examiner has identified no disclosure in KANITZ with regard to using vacuum in the breast roll 24;

Claim 33 is separably patentable from claim 22 in that it recites that the at least one suction element is positioned adjacent the area of the separation point. While Appellant acknowledges that Fig. 5 of KAMPS shows a suction device 30 arranged downstream from a forming roll 15, Appellant submits that the Examiner cannot properly characterize the distance between the suction element 30 and the separation point between belts 12 and 13 as “adjacent”. The Examiner simply cannot reasonably characterize the distance shown in Fig. 5 as either lying near, or close to, or next to each other. Moreover, while Fig. 1 of

ERIKSON shows a suction element 23 arranged in an area of belt separation, this separation is well downstream of the forming element 1. Finally, while Fig. 1 of KANITZ shows a suction element 54 arranged in an area of belt separation, this separation is clearly well downstream of the forming element 24;

Claim 34 stands or falls with claim 33 for purposes of appeal;

Claim 35 is separately patentable from claims 33 and 22 in that it recites that the at least one suction element comprises a vacuum suction element and that the vacuum present inside the suction element is adjustable. Appellant submits that each of KAMPS and KANITZ fails to disclose or suggest a suction element with adjustable vacuum. Moreover, while the Examiner has alleged that ERIKSON teaches an adjustable vacuum suction element, the Examiner identified any language in ERIKSON which specifically discloses *a vacuum suction element wherein the vacuum present inside the suction element is adjustable*;

Claim 36 is separately patentable from claims 33 and 22 in that it recites that the at least one suction element is positioned in front of the separation point, in a web travel direction. While Appellant acknowledges that the suction element 30 in KAMPS and/or the suction element 23 in ERIKSON and/or the suction element 54 in KANITZ are arguably positioned in front of separation points, it is also clear that such separation points are not positioned *immediately following the forming roll*. Thus, Appellant submits that no proper combination of the teachings of these documents discloses or suggests the combination of

features recited in this claim;

Claim 37 is separately patentable from claims 33 and 22 in that it recites that the at least one suction element causes the inner belt to separate from the outer belt. While Appellant acknowledges that the suction element 23 ERIKSON and the suction element 54 in KANITZ are likely to cause belt separation, it is also clear that such separation does not occur *immediately following the forming roll*. To the contrary, Fig. 1 of ERIKSON shows a suction element 23 well downstream of the forming roll 1. Similarly, Fig. 1 of KANITZ shows a suction element 54 well downstream of the forming roll 24. Finally, as KAMPS positions the suction element 30 well away from the separation pint, it is clear that the suction element 30 does not cause in any way the belt separation;

Claim 38 stands or falls with claim 33 for purposes of appeal;

Claim 39 is separately patentable from claim 1 in that it recites that the former further comprises at least one blowing element positioned adjacent the outer belt on a side which is opposite the inner belt. While the Examiner has implicitly alleged that KAMPS or ERIKSON teaches the recited blowing element, the Examiner has not identified any feature in either of these documents which discloses the claimed blowing device. Appellant notes that the devices 1, 7 and 23 in Fig. 1 of ERIKSON are vacuum devices and not blowing devices. Moreover, Fig. 5 of KAMPS shows no such blowing device. Finally, Appellant notes that the Examiner has identified no such blowing device in KANITZ;

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Claims 40-42 are separately patentable from claims 39 and 22 in that they respectfully recite that the at least one blowing element is located in the area of the separation point, that the at least one blowing element is located in the area of the separation point and inside a loop of the outer belt, and that the at least one blowing element is arranged at least essentially over an entire width of one of the outer belt and the tissue web. As noted above, the Examiner has not identified any feature in any of these documents which discloses the claimed blowing device, much less, one located in the area of the separation point, or one located in the area of the separation point and inside a loop of the outer belt, or one arranged at least essentially over an entire width of one of the outer belt and the tissue web;

Claim 43 is separately patentable from claim 22 in that it recites that the forming element comprises a suction zone having adjustable vacuum. Appellant submits that each of KAMPS and KANITZ fails to disclose or suggest a suction element with adjustable vacuum. Moreover, while the Examiner has alleged that ERIKSON teaches an adjustable vacuum suction element, the Examiner identified any language in ERIKSON which specifically discloses a forming element with *a suction zone having adjustable vacuum*; and

Claims 44-47 stand or fall with claim 22 for purposes of appeal.

Thus, for reasons given above, including reasons given for the reversal of the rejection of independent claims 22 and 68, reversal of the Examiner's decision to twice reject claims 22, 24-27, 29-47 and 68 is requested. Further, Appellants request that the application be

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remanded to the Examiner for allowance.

**(D) The Rejection of Claim 69 Under 35 U.S.C. section 103(a) over KAMPS in View of ERIKSON and KANITZ and Further in View of TIETZ is in Error, the Rejection Should be Reversed, and the Application Should be Remanded to the Examiner.**

Reversal of the rejection of claim 69 under 35 USC 103(a) as being unpatentable over KAMPS in view of ERIKSON and KANITZ and further in view of TIETZ is requested.

In the rejection, the Examiner asserted that KAMPS, ERIKSON and KANITZ disclose all the claimed features except for the shoe press nip. However, the Examiner asserted that TIETZ teaches this feature. Accordingly, the Examiner concluded that it would have been obvious to one of ordinary skill in the art to modify the device disclosed in KAMPS in view of ERIKSON, KANITZ and TIETZ. Appellant respectfully disagrees that the above-noted claim is unpatentable over the suggested combination of documents.

Appellant submits that the rejection should be reversed at least for the following reasons. First, the references themselves (KAMPS, ERIKSON, KANITZ and TIETZ) fail to provide disclosure for each and every feature recited in the above-noted claims. Second, there is no motivation to combine the teachings of the prior art references in the manner asserted by the Examiner.

Appellant submits that, contrary to the Examiner's assertions, KAMPS, as modified by ERIKSON, KANITZ and TIETZ, does not render the combination of features recited in

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independent claim 68 unpatentable and that it would not have been obvious to combine the teachings of KAMPS, ERIKSON, KANITZ and TIETZ.

In particular, Appellant respectfully submits that no proper combination of KAMPS, ERIKSON, KANITZ and TIETZ discloses or suggests, *inter alia*, that each of the inner and outer belts is guided over the forming roll and *thereafter separating from one another in the area of a separation point located immediately following the forming roll* and at least one of at least one suction element positioned inside the inner loop and adjacent the inner belt on a side which is opposite the outer belt and *a conditioning device positioned adjacent the outer belt so as to clean the outer belt*, wherein at least one of the inner and the outer belts is *a dewatering wire having zonally variable wire permeability*, as recited in independent claim 68.

As discussed above, Fig. 5 of KAMPS shows an embodiment in which a suction device 30 is located far away from where the belts 12 and 13 separate, i.e., it is not positioned *adjacent the area of the separation point*. It is also abundantly clear that the suction device 30 is not arranged *within the forming roll 15*. To the contrary, the suction device 30 in Fig. 5 of KAMPS is clearly located far downstream from both forming roll 15 and the separation point. It is further apparent that Fig. 5 of KAMPS does not show inner and outer belts which *separate from each other immediately following the forming roll*.

Moreover, while Appellant notes that Fig. 5 (and page 9, lines 27-35) of KAMPS

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apparently discloses the use of a decorative forming fabric 13 as an outer wire on a crescent former, it is clear that, unlike the invention, there is no disclosure or suggestion in KAMPS with regard to using *a dewatering belt having zonally variable wire permeability* in order to ensure that the tissue web can be securely lifted from one of the wires via a suction device. Finally, it is clear from Fig. 5 that KAMPS provides no conditioning device on the outer belt 13.

ERIKSON and, in particular Fig. 1, similarly teaches to separate the belts 3 and 4 far away from the forming roll 1, i.e., after roll 6. Accordingly, it is clear that this document does not disclose or suggest that *the inner and outer belts separate from each other immediately following the forming roll*. Appellant further notes that the Examiner has identified no disclosure in this document with regard to *a dewatering belt having zonally variable wire permeability*. Nor does this document appear to disclose using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device, as in Appellant's invention. Finally, it is clear from Fig. 1 that ERIKSON provides no conditioning device on outer belt 3.

KANITZ also teaches to separate the belts 26 and 28 far away from the forming roll 24, i.e., after pickup box 54. Accordingly, it is clear that this document does not disclose or suggest that *the inner and outer belts separate from each other immediately following the forming roll*. It is also apparent that this document does not disclose or suggest the at least

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one suction element being *positioned at least one of within the forming roll and adjacent the area of the separation point*. To the contrary, col. 3, line 13 indicates that the roll 24 is a breast roll. Finally, while Appellant acknowledges that col. 5, lines 13-15 of KANITZ discloses that one of the fabrics “may have a texture which imparts specialized functionality or appearance to the web”, Appellant submits that this document also appears to lack any disclosure with regard to *a dewatering belt having zonally variable wire permeability*. Nor does this document appear to disclose using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device.

Finally, TIETZ similarly discloses locating the suction device 6 at a location far away from where the belts separate. Accordingly, it is clear that this document does not disclose or suggest the at least one suction element being *positioned at least one of within the forming roll and adjacent the area of the separation point*. Nor is it apparent that TIETZ discloses that *the inner and outer belts separate from each other immediately following the forming roll*. Appellant further notes that this document also appears to lack any disclosure with regard to *a dewatering belt having zonally variable wire permeability*. Finally, Appellant submits that this document does not disclose or suggest using such a belt to ensure that the tissue web can be securely lifted from one of the wires via a suction device.

Thus, even if the teachings of these documents were properly combined, which Appellant submits they cannot be, such a combination would nevertheless lack the



combination of features recited in at least independent claim 68. Moreover, Appellant submits that each of these documents fails to disclose or suggest the requisite motivation or rationale for combining these documents in the manner asserted by the Examiner. Finally, Appellant submits that the disclosure of ERIKSON, KANITZ and TIETZ fails to cure the deficiencies in KAMPS, and vice versa.

Because neither KAMPS, ERIKSON, KANITZ nor TIETZ provide any teaching or suggestion with regard to at least separating *the inner and outer belts from each other immediately following the forming roll and a dewatering belt having zonally variable wire permeability*, and in fact teach against the former feature, Appellant submits that it would not have been apparent to one ordinarily skilled in the art to modify KAMPS to provide for belt separation immediately following the forming roll. Moreover, as the belts in KAMPS, ERIKSON, KANITZ and TIETZ are not disclosed as *having zonally variable wire permeability*, Appellant submits that there is no teaching or suggestion of this feature.

Thus, as the asserted combination of documents is contrary to the express teachings of each applied document, Appellant submits that the art of record fails to provide the requisite motivation or rationale for combining the art in the manner asserted by the Examiner.

Claim 69 stands or falls with claim 68 for purposes of appeal.

Thus, for reasons given above, including reasons given for the reversal of the rejection

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of independent claim 68, reversal of the Examiner's decision to twice reject claim 69 is requested. Further, Appellants request that the application be remanded to the Examiner for allowance.

## I. CONCLUSION

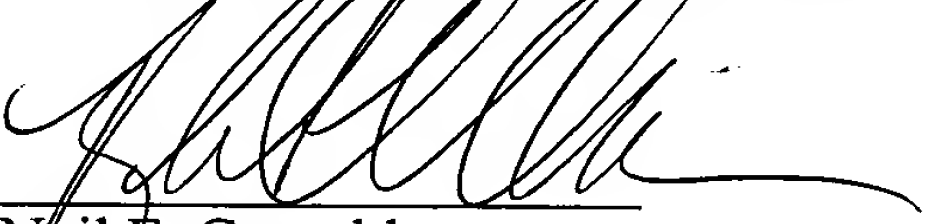
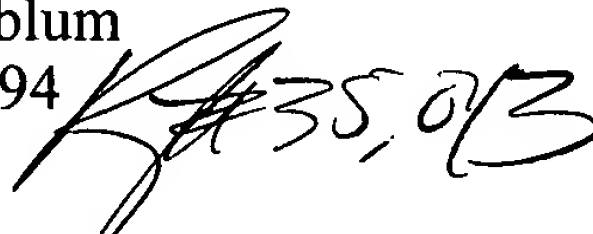
For the reasons advanced above, Appellant submits that the rejections are erroneous and should be reversed. Claims 1-5, 7-22, 24-27, 29-47, 68 and 69 patentably define over the applied art of record.

This appeal brief is being submitted in triplicate, pursuant to 37 CFR 1.192(a).

A check is enclosed in the amount of \$330.00 for payment of the fee for filing an appeal brief, as set forth in 37 CFR 1.17(c). The Commissioner is authorized to charge any additional fee, or to credit any overpayment, to Deposit Account No. 19-0089.

If there are any questions about this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,  
Thomas THOROE SCHERB et al.

  
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March 5, 2004  
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Attachments: Claims on Appeal

*Claims on Appeal:*

1. A former for producing a tissue web, comprising:
  - a forming element comprising a forming roll, an inner dewatering belt, and an outer dewatering belt;
  - the inner and outer belts converging to form a stock inlet nip;
  - at least one of the inner and outer belts being a dewatering belt having zonally variable wire permeability;
  - the inner and outer belts being guided by the forming roll and thereafter separating from one another in the area of a separation point;
  - at least one suction element positioned adjacent the inner belt on a side which is opposite the outer belt; and
  - the at least one suction element being positioned at least one of:
    - within the forming roll; and
    - adjacent the area of the separation point,
  - wherein the inner and outer belts separate from each other immediately following the forming roll.
2. The former of claim 1, wherein at least the outer belt is a dewatering wire having zonally variable wire permeability.
3. The former of claim 1, wherein the tissue web is separated from the outer belt in the area of the separation point.
4. The former of claim 3, wherein the tissue web is retained by the inner wire after being separated from the outer belt.
5. The former of claim 1, wherein at least one of the inner and outer belts comprises a circulating continuous dewatering belt.

7. The former of claim 1, wherein each of the inner and outer belts is a circulating continuous dewatering wire having zonally variable wire permeability.

8. The former of claim 1, wherein the inner belt contacts the forming element and the outer belt is guided with the inner belt around the forming element such that the outer belt does not come into contact with the forming element.

9. The former of claim 1, wherein the forming element comprises the at least one suction element.

10. The former of claim 9, wherein the forming element comprises a suction zone.

11. The former of claim 1, wherein the at least one suction element is positioned adjacent the area of the separation point.

12. The former of claim 11, wherein the at least one suction element is provided inside a loop of the inner belt.

13. The former of claim 1, wherein the at least one suction element comprises a vacuum suction element and wherein the vacuum present inside the suction element is adjustable.

14. The former of claim 1, wherein the at least one suction element is positioned in front of the separation point, in a web travel direction.

15. The former of claim 1, wherein the at least one suction element causes the inner belt to separate from the outer belt.

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16. The former of claim 1, wherein the at least one suction element is arranged at least essentially over an entire width of one of the inner belt and the tissue web.

17. The former of claim 1, further comprising at least one blowing element positioned adjacent the outer belt on a side which is opposite the inner belt.

18. The former of claim 17, wherein the at least one blowing element is located in the area of the separation point.

19. The former of claim 17, wherein the at least one blowing element is located in the area of the separation point and inside a loop of the outer belt.

20. The former of claim 17, wherein the at least one blowing element is arranged at least essentially over an entire width of one of the outer belt and the tissue web.

21. The former of claim 1, wherein the forming element comprises a suction zone having adjustable vacuum.

22. A former for producing a tissue web, comprising:  
a forming element comprising a forming roll, an inner dewatering belt, and an outer dewatering belt;  
the inner and outer belts converging to form a stock inlet nip;  
at least one of the inner and outer belts being a dewatering belt having zonally variable wire permeability;  
the inner and outer belts being guided by the forming roll and thereafter separating from one another in the area of a separation point;  
a conditioning device positioned adjacent the outer belt; and  
at least one suction element being positioned at least one of:

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within the forming roll; and  
adjacent the area of the separation point,  
wherein the inner and outer belts separate from each other immediately following the forming roll.

24. The former of claim 22, wherein the at least one suction element is positioned adjacent the inner belt on a side which is opposite the outer belt.

25. The former of claim 22, wherein the tissue web is separated from the outer belt in the area of the separation point.

26. The former of claim 25, wherein the tissue web is retained by the inner wire after being separated from the outer belt.

27. The former of claim 22, wherein at least one of the inner and outer belts comprises a circulating continuous dewatering belt.

29. The former of claim 22, wherein each of the inner and outer belts is a circulating continuous dewatering wire having zonally variable wire permeability.

30. The former of claim 22, wherein the inner belt contacts the forming element and the outer belt is guided with the inner belt around the forming element such that the outer belt does not come into contact with the forming element.

31. The former of claim 22, wherein the forming element comprises the at least one suction element.

32. The former of claim 31, wherein the forming element comprises a suction zone.

33. The former of claim 22, wherein the at least one suction element is positioned adjacent the area of the separation point.

34. The former of claim 33, wherein the at least one suction element is provided inside a loop of the inner belt.

35. The former of claim 33, wherein the at least one suction element comprises a vacuum suction element and wherein the vacuum present inside the suction element is adjustable.

36. The former of claim 33, wherein the at least one suction element is positioned in front of the separation point, in a web travel direction.

37. The former of claim 33, wherein the at least one suction element causes the inner belt to separate from the outer belt.

38. The former of claim 33, wherein the at least one suction element is arranged at least essentially over an entire width of one of the inner belt and the tissue web.

39. The former of claim 22, further comprising at least one blowing element positioned adjacent the outer belt on a side which is opposite the inner belt.

40. The former of claim 39, wherein the at least one blowing element is located in the area of the separation point.

41. The former of claim 39, wherein the at least one blowing element is located in the area of the separation point and inside a loop of the outer belt.

42. The former of claim 39, wherein the at least one blowing element is arranged at least essentially over an entire width of one of the outer belt and the tissue web.

43. The former of claim 22, wherein the forming element comprises a suction zone having adjustable vacuum.

44. The former of claim 22, wherein the conditioning device comprises a wire cleaning device.

45. The former of claim 44, wherein the conditioning device is arranged at least essentially over an entire width of one of the outer belt and the tissue web.

46. The former of claim 44, wherein the inner belt is a felt belt.

47. The former of claim 22, wherein the former is a crescent former.

68. A former for producing a tissue web, comprising:  
a forming roll, an inner continuous dewatering belt, and an outer continuous dewatering belt;  
the inner and outer belts converging to form a stock inlet nip;  
a headbox positioned adjacent the stock inlet nip;  
each of the inner and outer belts forming corresponding inner and outer continuous loops which are each guided over a plurality of guide rolls;  
each of the inner and outer belts being guided over the forming roll and thereafter separating from one another in the area of a separation point located immediately following



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the forming roll; and

at least one of:

at least one suction element positioned inside the inner loop and adjacent the inner belt on a side which is opposite the outer belt; and

a conditioning device positioned adjacent the outer belt so as to clean the outer belt, wherein at least one of the inner and the outer belts is a dewatering wire having zonally variable wire permeability.

69. The former of claim 68, further comprising:

a press nip through which the tissue web and the inner belt is guided, the press nip being formed between a cylinder and shoe press roll,

wherein the tissue web is removed from the inner belt after passing through the press nip.